

Regulated Product Metrics: Measuring Success of the San José Bag Ordinance

Bay Area Trash Summit
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*Delivering world class utility services and programs
to improve our health, environment and economy*

Good afternoon everyone

Introduce

Work with City of San Jose's stormwater program


Here to talk about regulated product metrics – in particular how this applies to San José's bag ordinance



6/29/11 - Guadalupe River upstream of 880

City of San José

- 3rd largest city in CA
- 170 mi²
- 136+ miles of creeks and streams
- 26 distinct creeks and streams
- 30,000 storm drains



Environmental Services

San José is big.

Not only big, but very 'creek rich.' Many miles of creeks run throughout the City – represent a great asset for our community but also represent concern when see problematic pollutants throughout our creeks

(CLICK) – single use bag

While San Jose is only one third the size of Los Angeles, we have roughly the same number of storm drain inlets.

STARTING JANUARY 1, 2012



**No more.
No más.
Không còn.**



Pay per bag.
Pagar por bolsa.
Trả cho mỗi túi.



Bring your own bag.
Traiga su propia bolsa.
Mang túi riêng của bạn.

www.sjrecycles.org/bags

Bring Your Own Bag (BYOB)

- Effective January 1, 2012
- All retail (~5,000 businesses)
- \$0.10 fee for paper bags
- Stakeholder Engagement Effort



Environmental Services

Effective January 1, 2012. Similar to many other ordinances...
ban single use disposable bags and assess a fee for paper bags

Suffice it to say, huge effort and not easy...

Approx **2.5 years of stakeholder outreach and EIR process followed by a year** of ramped up outreach focused on retailers and public getting ready implementation.
(hopefully advertisement look familiar if you've done any shopping in San Jose past couple of years)
85,000 reusable bags given away since 2008 as part of this effort.

Part of our charge from the San José City Council was to **evaluate the effectiveness** of this ordinance and to periodically report back on compliance and changes in the environment.



Measuring the benefit...

- Bag Metric Program: Understand performance of the BYOB ordinance from different perspectives
 - Local retailer transition
 - Changes in shopping habits
 - Changes in creek conditions
- Evaluate ordinance before and after


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Environmental Services

Observational data: Is there less litter?

Fundamentally the City is seeking data to answer the question: **“Is it better now than before?” having effect want?**

In order to answer this question, Environmental Services staff developed a program of data collection to understand the performance of this new ordinance from different perspectives:

Staff sought to answer the following questions:

- How are local businesses **complying** with the new ordinance?
- To what extent have local shoppers changed their **habits** and started using reusable bags?
- Are there fewer single-use bags being littered on City **streets** and **creeks**?

Going to present our data to date –

Data must be considered **preliminary**. In all cases, we are only considering two to three **observations**. We need more data collection before we can speak with certainty and determine long term effect.

Are businesses adjusting?

■ Retailer transition:

- Retailer compliance
 - Approximately 98%
- Use of thicker plastic bags varied
 - ~12% in Feb 2012
 - ~23% in Oct 2012
 - ~8% in Aug 2013



First ? : Are businesses adjusting?

Visual Compliance Survey by Inspection Staff

Enforcement of the ordinance is complaint-based, staff wanted to better understand how compliance was progressing in the retail community.

Monitoring Method:

- Randomly selected areas within each of the **10 Council Districts** and the **4 largest shopping malls** in San Jose.
- Within each area, inspectors randomly select a **large, a medium, and a small** retail business.
- Within each shopping mall, inspectors randomly select a large, a medium, and three small retail businesses.
- Quick observations at each business **entrance/exit, without engaging** store personnel or customers.
- Other visual observations were also made: types of bags being used by customers, BYOB outreach material, whether or not reusable bags were offered for sale.

The survey was conducted 3 times - in February 2012 (two month after the ordinance was enacted), October 2012, and August 2013
Among the most notable data from this survey is the lack of a trend in use of compliant **2.25 mil** “reusable” plastic bags.
(SHOW BAG)

February 2012, approximately 12% of businesses

October, 2012, approximately 23% of businesses

August, 2013 - approximately **8%** of businesses

After the first two visual surveys, data appeared to indicate a large increase in the number of thicker 2.25 mil plastic bags being used. While these bags are compliant with the our ordinance, but concern might become litter.

-**Staff was preparing to act by recommending** to our City Council an amendment that would place a fee on all reusable bags (provided free of charge) -- including these new thicker plastic bags.

-**However** the August 2013 survey did not show continued trending data... 8%...?

-In addition, we have no data as to whether these bags were contributing to the litter in the streets and creeks.

With only three data points regarding compliance and no data regarding litter, city staff have decided to make no recommendations to amend the ordinance for the purposes of restricting the use of these thicker bags at this time. Rather, staff will continue to observe trends in bag usage and collect additional data on the litter effects of these thicker bags.



Used visual bag observations at retail stores to assess behavior change

So how did we go about our survey?

-Observed customers leaving selected retail stores for one hour at retail store pre- and post-implementation

-Various store types (grocery, pharmacy, general retail) and sizes

-Counted the number and type of bags or absence of bags.

-**Pre: 3 surveys** (approximately 3,000 customer observed) 2009, 2010 Winter, 2010 Spring

-**Post: 2 surveys plus another tentatively this fall but might be delayed** (just over 2,000 customer observed) 2012 Spring, 2012 Fall

IMPORTANT TO NOTE

The visual bag observations surveys were a qualitative assessment intended to try to discern any observable effects or trend related to the ordinance. In almost all instances, the observed trends showed demonstrable improvements. **So although we acknowledge that the confidence of the data as a definitive quantitative assessment may not be there, trends observed show very strong indicators that these trends are occurring.**

The results were:

-90% reduction in average use of single-use bags

-Significant increase in reusable bag use

-Increase customers not using bag (hand carry or in cart, etc)

-Not much change in paper bag use



Are the creeks better than before?

■ Changes in watershed conditions:

- 59% decrease in plastic bag litter on streets
- 60% decrease in plastic bags found at creek hot spots in first year
- Additional 24% decrease observed in creek hot spots in second year

Million dollar question – Are the creeks better than before?

Look litter in streets and creeks:

Decrease litter assessed via street litter audits throughout the City – staff characterizes trash within set area as measured with a transect.

In Creek Assessments:

Look at our hot spots -

As part of our requirements under the Municipal Regional Stormwater Permit, the City of San Jose is required to clean 32 trash hot spots to “no visible impact” from trash.

Starting in 2010, trash was sorted and characterized to establish what percentage of the litter was single-use plastic bags. Now sort 10 spots every year. Once again, the results have been remarkable.

(first yr decrease: from 2011-2012; second yr decrease from 2012 – 2013)

Positive Trends...

...in removing a uniquely problematic kind of litter



November 2007 – bags collected by 1 worker in 2 hours



February 2013 – bags collected by 9 workers in 3 hours



Environmental Services

In summary

The City of San José looked at a variety of different measurement practices to evaluate its Single-Use Bag Ordinance from **three different perspectives**

Retailer Compliance: Decreases in thin film plastic bag use. But the data regarding the use of thicker “reusable” plastic bags is inconclusive.

Consumer Behavior: Definite movement toward reusable bags or no bags

Litter Reduction Effectiveness: Improvements in street and creek conditions

Again, as mentioned **preliminary**.

- need more observations.
- need more time, given variable nature of litter.
- May reconsider sample size of consumer visual observations to have data from more stores and greater variety stores
- Some measurement protocols work better than others. Street litter audits are highly variable and are resource intensive.
- The data quantifying the use of the 2.25 mil “reusable” bags requires greater study. Including data collection that would document the number of these bags that are ending up as litter.

So.... this is a continually improving process. While the initial information is noteworthy, a longer period of time, greater accounting for seasonality, reconsideration of some our methods and sampling sizes may all need some adjusting.

But where head next?

Pictures are from a community group that has conducting on-land cleanups for years... before and after...

Next?



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San José recently passed an ordinance to **phase-out Expanded PolyStyrene** or EPS.

Effective January 2014 for multi-state restaurants – January 2015 for all other restaurants

We track the prevalence of EPS at our Hot Spot Cleanups... hope to see similar success here as with bags... we'll see.